

**Notice of Allowability**

Application No.

10/680,780

Applicant(s)

ANDERSON ET AL.

Examiner

Leo Boutsikaris

Art Unit

2872

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 2/23/06.
2. ☒ The allowed claim(s) is/are 1-84.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material.         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Dr. Raj Dave on 3/17/06.

The application has been amended as follows:

#### **IN THE CLAIMS**

In claim 35, line 2, the phrase --comprising page-wise data modulated by a spatial light modulator (SLM)-- is inserted after "first signal beam".

In claim 40, line 2, the phrase --comprising page-wise data modulated by a spatial light modulator (SLM)-- is inserted after "first signal beam".

In claim 74, line 2, the phrase --comprising page-wise data modulated by a spatial light modulator (SLM)-- is inserted after "first signal beam".

In claim 78, line 3, the phrase --comprising page-wise data modulated by a spatial light modulator (SLM)-- is inserted after "first signal beam".

The following is an examiner's statement of reasons for allowance:

Claims 1-84 are allowable over the prior art of record for at least the reason that even though the prior art discloses holographic multiplexing optical systems where multiple

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holograms are recorded in an overlapped fashion, such that two adjacent recording signal beams have no overlapping beam waists, and wherein the recording is performed in a bit-wise way, the prior art fails to teach or reasonably suggest, regarding claims 1-34, 38, 84, a method for holographic recording comprising creating a first hologram in a holographic media using a first signal beam comprising page-wise data modulated by a spatial light modulator, and separating the first hologram from the second hologram such that substantially no portion of the beam waist of the first signal beam occurs at the same location as any portion of beam waist of the second signal beam, regarding claims 35-37, a method for reading out a first hologram created in a holographic media from a first signal beam comprising page-wise data modulated by a spatial light modulator, such that substantially no portion of the beam waist of the first signal beam occurs at the same location as any portion of beam waist of the second signal beam, regarding claims 39-73, 77, an apparatus for hologram recording comprising a first signal beam comprising page-wise data modulated by a spatial light modulator, such that substantially no portion of the beam waist of the first signal beam occurs at the same location as any portion of beam waist of the second signal beam, regarding claims 74-76, an apparatus for reading out a first hologram created in a holographic media from a first signal beam comprising page-wise data modulated by a spatial light modulator, such that substantially no portion of the beam waist of the first signal beam occurs at the same location as any portion of beam waist of the second signal beam, and regarding claims 78-83, a holographic media including a first plurality of holograms multiplexed with a first hologram at a first location in the holographic media, the first hologram generated by a first signal beam comprising page-wise data modulated by a spatial light modulator, such that

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substantially no portion of the beam waist of the first signal beam occurs at the same location as any portion of beam waist of the second signal beam, as set forth by the claimed combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D., J.D.  
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March 17, 2006

  
**LEONIDAS BOUTSIKARIS**  
**PRIMARY EXAMINER**